

## Product Testing and Research Capabilities with Mount Washington Observatory

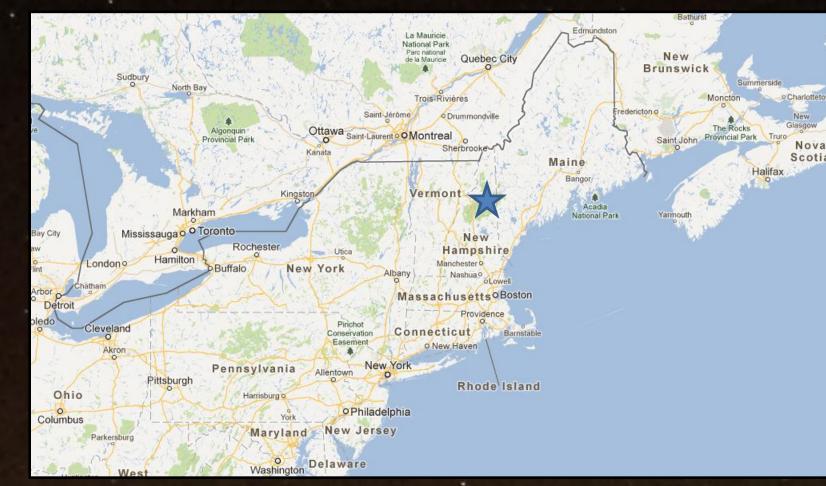


Home to the fastest winds ever observed by man, 231 mph, Mount Washington's legendary extremes have earned the Mount Washington Observatory worldwide acclaim. This fully-staffed mountaintop weather station is the only one of its kind in the Western Hemisphere. At 6,288 feet above sea level, Mount Washington is the tallest peak in the northeastern United States. Since 1932, Mount Washington Observatory has studied the weather, climate, biosphere, and their dynamic interactions that have shaped the unique environment and culture of the White Mountains region.

Nowhere else in the contiguous United States is able to offer such readily accessible, consistently extreme conditions. With an average year-round temperature below freezing, winter winds at or above hurricane force occurring every other day, ample precipitation, and destructive ice accretion, Mount Washington Observatory provides an unmatched natural laboratory for testing.

While a long-standing climate record at one location is valuable, expanding this record into a network of locations has proven to be even more effective in documenting and understanding the weather of the region. Mount Washington Observatory over the past decade has designed and implemented a network of eighteen solar-powered remote weather stations throughout the White Mountains region of New Hampshire. At each of these sites, the Observatory measures temperature and relative humidity. More than half of these sites also collect wind data.

Mount Washington Observatory strives to advance the understanding of atmospheric and climatic processes and their impacts through collaborative research that encompasses multiple scientific disciplines. Mount Washington Observatory has partnered in research with entities such as the National Aeronautics and Space Administration (NASA), Cold Regions Research and Engineering Laboratory (CRREL), Massachusetts Institute of Technology (MIT), Federal Aviation Administration (FAA), and the National Oceanic and Atmospheric Administration (NOAA). Testing for purposes of implementation has taken place with several meteorological instruments including ice detectors, sonic anemometers, snow gauges, and LIDAR. Mount Washington Observatory has also tested nonmeteorological items such as dialysis machines, tents, and coffee makers that are in use today.



Within a one-day drive from the hubs of Boston, Montreal, Hartford, Providence, and New York City, the location adds a touch of convenience to its meteorological allure.





On April 12, 1934, the photographed multiple bucket anemometer measured wind speeds of 231 mph.



Mount Washington Observatory measures wind speed on the summit via pitot tube anemometer.



Rime ice accretion, or freezing fog, is a common occurrence on the summit of Mount Washington and has been the focus of several research projects.



Mount Washington Observatory has a mesonet of eighteen sites throughout the area. Temperature, humidity, wind speed, and wind direction data are collected several times per hour and sent real time to the summit via radio link. Visit www.MountWashington.org for more info.